Amendments to the Claims

1. (currently amended) A method of synchronizing two de/compression modems in a voice frame network, each of the modems being connected with a corresponding gateway to form a corresponding segment, the method comprising:

terminating the physical layer at either end by the corresponding gateways;

negotiating at either gateway a physical layer and error-correcting data link layer with the corresponding modem;

sending from either gateway to an associated modem in response to any poll command therefrom a not-ready message;

signaling the other gateway when physical layer and error-correcting data link layer negotiations have been completed; and

when each gateway has signaled the other that negotiations have been completed, halting said not-ready message-sending and sending a ready message to a corresponding modem, whereby synchronized data transmissions between the modems commences in a modem relay session.

2. (original) The method of claim 1, wherein the not-ready message is a receiver-not-ready (RNR) message compliant with the ITU-T V.42 protocol and wherein the ready message is a receiver ready (RR) message compliant with the ITU-T V.42 protocol.

3. (currently amended) The method of claim 1 which, after said signaling and upon occurrence of a destructive break condition in either of the segments, further comprises:

relaying the occurrence of the destructive break condition from a segment where it is detected to the other segment participating in the modem relay session.

4. (original) The method of claim 1 which, after said signaling and upon receipt at either gateway from a corresponding modem of an initiate data transfer command, further comprises:

relaying the initiate data transfer command from a segment where it is detected to the other segment.

5.   (original) The method of claim 4 wherein the initiate data transfer command is a Set Asynchronous Balanced Mode Extended (SABME) message compliant with the ITU-T V.42 protocol.

6.   (original) The method of claim 5 wherein the synchronized data transmissions between the modems utilizes a reliable transport.

7.   (currently amended) An Aapparatus for synchronizing compression and decompression between two endpoint modems linked over a voice frame network, the apparatus comprising:

a negotiation mechanism for bringing up physical and data link layers on a segment associated with a first one of the two endpoint modems and an associated gateway as answerer and for bringing up physical and data link layers on another segment associated with a second one of the two endpoint modems and associated gateway as originator;

a signaling mechanism associated with each gateway responsive to said negotiation mechanism for signaling the other gateway and for awaiting a signal therefrom;

a command mechanism for sending a receiver ready command to the two endpoint modems; and

a commencement mechanism responsive to said command mechanism for commencing data transmission/reception between the two endpoint modems characterized by synchronized data compression and decompression in a modem relay session.

8.   (currently amended) The apparatus of claim 7 which further comprises:

a detection mechanism for detecting a destructive break condition or receipt of an initiate data transfer command;

a relaying mechanism associated with each gateway responsive to said detection

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mechanism upon either such detection for relaying the destructive break condition to the other gateway upon detection of the same and for relaying the receipt of the initiate data transfer command upon detection of the same; and

a data discard mechanism responsive to said relaying mechanism for discarding data until a modem initialization responsive to the destructive break condition and/or the initiate data transfer command receipt is completed.

9.   (original) The apparatus of claim 8, wherein the receiver ready command is a receiver ready (RR) message compliant with the ITU-T V.42 protocol.

10.   (original) The apparatus of claim 8 in which upon receipt at either gateway from a corresponding modem of an initiate data transfer command, said relaying mechanism associated with each gateway responsive to such receipt further relays the initiate data transfer command from a segment where it is detected to the other segment.

11.   (original) The apparatus of claim 10, wherein the initiate data transfer command is a Set Asynchronous Balanced Mode Extended (SABME) message compliant with the ITU-T V.42 protocol.

12.   (original) The apparatus of claim 8, wherein said negotiating mechanism during said negotiations of the physical and data link layers sends from either gateway to an associated modem in response to any poll command therefrom a not-ready message.

13.   (original) The apparatus of claim 12, wherein the not-ready message is a receiver-not-ready (RNR) message compliant with the ITU-T V.42 protocol.

14.   (currently amended) A computer-readable medium containing a program for synchronizing two de/compression modems in a voice frame network wherein the modems each are connected with a corresponding gateway to form a corresponding segment, the program comprising:

instructions for terminating the physical layer at either end by the corresponding

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PAGE 8/17 * RCVD AT 5/28/2004 12:48:46 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:5032744622 * DURATION (mm-ss):06-30

gateways;

instructions for negotiating at either gateway a physical layer and error-correcting data link layer with the corresponding modem;

instructions for sending from either gateway to an associated modem in response to any poll command therefrom a not-ready message;

instructions for signaling the other gateway when physical layer and error-correcting data link layer negotiations have been completed; and

instructions for halting the not-ready message-sending and for sending a ready message to a corresponding modem when each gateway has signaled the other that negotiations have been completed establishing a modem relay session.

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15.   (original) The computer-readable medium in accordance with claim 15, which computer-readable medium further comprises:

instructions for relaying an occurrence of a destructive break condition from a segment where it is detected to the other segment.

16.   (original) The computer-readable medium in accordance with claim 15, which computer-readable medium further comprises:

instructions for relaying an initiate data transfer command from a segment where it is detected to the other segment.

17.   (currently amended) An ~A~apparatus for synchronizing compression and decompression between two endpoint modems linked over a voice frame network, each of the modems being connected with a corresponding gateway to form a corresponding segment, the apparatus comprising:

means for terminating the physical layer at either end by the corresponding gateways;

means for negotiating at either gateway a physical layer and error-correcting data link layer with the corresponding modem;

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means for sending from either gateway to an associated modem in response to any poll command therefrom a not-ready message;

means for signaling the other gateway when physical layer and error-correcting data link layer negotiations have been completed; and

means active when each gateway has signaled the other that negotiations have been completed for halting the not-ready message-sending and for sending a ready message to a corresponding modem, whereby data transmissions between the modems commences that is characterized by synchronized data compression and decompression in a modem relay session.

18.   (original) The apparatus of claim 17 which further comprises:

means for relaying a destructive break condition detected at either gateway to the other gateway.

19.   (original) The apparatus of claim 18 which further comprises:

means for relaying an initiate data transfer command received at either gateway to the other gateway.

20.   (original) The apparatus of claim 19, wherein the not-ready message is a receiver-not-ready (RNR) message compliant with the ITU-T V.42 protocol, wherein the ready message is a receiver ready (RR) message compliant with the ITU-T V.42 protocol and wherein the initiate data transfer command is a Set Asynchronous Balanced Mode Extended (SABME) message compliant with the ITU-T V.42 protocol.

21.   (currently amended) A method of synchronizing a local de/compression modem with a remote de/compression modem in a voice frame network, each of the modems being connected with a corresponding gateway to form a corresponding segment, the method comprising:

terminating the physical layer at the local modem by the corresponding local gateway;

negotiating by the local gateway a physical layer and error-correcting data link layer between the local modem and the remote modem;

sending from the local gateway to the local modem in response to any poll command therefrom a not-ready message;

signaling the remote gateway when physical layer and error-correcting data link layer negotiations have been completed; and

upon receipt by the local gateway of a signal from the remote gateway that the negotiations have been completed, halting said not-ready message-sending and sending a ready message to the local modem, thereby enabling synchronized data transmissions between the local and remote modems in a modem relay session.

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22.   (currently amended) An ~~A~~apparatus for synchronizing compression and decompression between two endpoint modems linked over a voice frame network via associated originator and answerer gateways, the apparatus comprising:

a negotiation mechanism associated with the originator gateway for bringing up physical and data link layers on a segment defined between the originator gateway and one of the two endpoint modems associated therewith;

a signaling mechanism associated with the originator gateway responsive to said negotiation mechanism for signaling the answerer gateway and for awaiting a signal therefrom;

a command mechanism associated with the originator gateway for sending a receiver ready command to at least the first one of the two endpoint modems; and

a commencement mechanism associated with the originator gateway and responsive to said command mechanism for commencing data transmission/reception between the two endpoint modems characterized by synchronized data compression and decompression in a modem relay session.

23.   (currently amended) An Aapparatus for synchronizing compression and decompression between two endpoint modems linked over a voice frame network via associated originator and answerer gateways, the apparatus comprising:

a negotiation mechanism associated with the answerer gateway for bringing up physical and data link layers on a segment defined between the answerer gateway and one of the two endpoint modems associated therewith;

a signaling mechanism associated with the answerer gateway responsive to said negotiation mechanism for signaling the originator gateway and for awaiting a signal therefrom;

a command mechanism associated with the answerer gateway for sending a receiver ready command to at least the first one of the two endpoint modems; and

a commencement mechanism associated with the answerer gateway and responsive to said command mechanism for commencing data transmission/reception between the two endpoint modems characterized by synchronized data compression and decompression in a modem relay session.

24.   (currently amended) An Aapparatus for synchronizing a local de/compression modem with a remote de/compression modem in a voice frame network, each of the modems being connected with a corresponding gateway to form a corresponding segment, the apparatus comprising:

means for terminating the physical layer at the local modem by the corresponding local gateway;

means for negotiating at the local gateway a physical layer and error-correcting data link layer between the local modem and the remote modem;

means for sending from the local gateway to the local modem in response to any poll command therefrom a not-ready message;

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means for signaling the remote gateway when the physical layer and error-correcting data link layer negotiations have been completed; and

means, active upon receipt by the local gateway of a signal from the remote gateway that the negotiations have been completed, for halting the not-ready message-sending and for sending a ready message to the local modem, thereby enabling synchronized data transmissions between the local and remote modems characterized by synchronized data compression and decompression in a modem relay session.

25.   (currently amended) A computer-readable medium containing a program for synchronizing a local de/compression modem with a remote de/compression modem in a voice frame network, each of the modems being connected with a corresponding gateway to form a corresponding segment, the program comprising:

instructions for terminating the physical layer at the local modem end by the corresponding local gateway;

instructions for negotiating by the local gateway a physical layer and error-correcting data link layer between the local modem and the remote modem;

instructions for sending from the local gateway to the local modem in response to any poll command therefrom a not-ready message;

instructions for signaling the remote gateway when physical layer and error-correcting data link layer negotiations have been completed; and

instructions, executable at the local gateway upon receipt thereby of a signal from the remote gateway that the negotiations have been completed, for halting execution of the not-ready message-sending instructions and for sending a ready message to the local modem, thereby enabling synchronized data transmissions between the local and remote modems in a modem relay session.

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